

**Abstract**

A magnetic recording medium, the order of layers in which is the substrate, the soft underlayer, the seedlayer, the 1<sup>st</sup> RuCr<sub>x</sub>-containing interlayer, the 2<sup>nd</sup> RuCr<sub>x</sub>-containing interlayer and the magnetic recording layer with preferably a oxides or nitrides-containing magnetic layer comprising grains, is disclosed. High-chromium ruthenium-chromium alloy used as inter layers significantly enhances coercivity and SMNR preferably due to the improved lattice match between RuCr inter layers and CoPt-based magnetic recording layers, and the surface energy of RuCr layers contributes to the performance improvement with the high-chromium addition into Ru inter layers.